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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,493	02/19/2002	Wataru Yamamoto	Q68543	1372

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EXAMINER	
PALADINI, ALBERT WILLIAM	
ART UNIT	**PAPER NUMBER**
2125	4

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/076,493	YAMAMOTO, WATARU	
	Examiner	Art Unit	
	Albert W Paladini	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 2* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 2* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donne (6486410) in view of pages 148-152 of Systems Engineering Tools by Chestnut.

Donne discloses an electroplating experiment management apparatus in figures 1-3 which can evaluate electrochemical deposition processes, electrolytic processes, and electrochemical cell performances. On lines 47-51, column 10, Donne states "A series of experiments were conducted in an array format to investigate three of the four basic parameters that influence electrolytic manganese dioxide (EMD) synthesis. The effects of current density, manganese sulfate concentration and sulfuric acid concentration were evaluated." In figures 4-6 Donne depicts graphs comparing experimental values and predicted values. Donne does not utilize the computer for performing the measurements and evaluations as recited in claims 1 and 2.

In figure 4.1-3 of Systems Engineering Tools on page 149, Chestnut discloses a computer for process control where the computer controls actuators for inputting experimental conditions, and sensors are attached to the output of the process for obtaining experimental data resulting from the input conditions.

In order to obtain real time accurate results, It would have been obvious to one of ordinary skill in the art to utilize a computer system as taught by Chestnut to control the electroplating system disclosed by Donne and perform the associated comparative analysis of predicted results with experimental results. Although the preambles of the claims recite an electroplating experiment, the body of the claims is not functionally or structurally linked to an electroplating experiment, so that numerous other experimental experiment management systems would have been sufficient to reject the claims.

It must be also noted that the techniques of developing deterministic or probabilistic models for prediction of physical phenomena and using statistical tools such as chi square distributions or statistical process control charts to compare predicted data with experimental or measurement data utilizing computers are also commonly used in laboratories and manufacturing environments.

Applicant's Arguments

3. Applicant's arguments filed on 4/9/03 have been fully considered but they are not persuasive.

The Applicant states on page 5 that "the Examiner fails to show that the applied references teach or suggest at least the specific limitation 'an experimental data analysis means for working out experimental data at each point of time during an experiment based upon analysis of said experimental data." Reference Donne states on lines 11-22 in column 12 "Each of the deposited electrodes was electrochemically characterized using chronoamperometry. Chronoamperometry was selected because it is a relatively fast experiment that provides high rate discharge data for each of the EMD samples. A fast characterization technique is desirable to allow a rapid throughput of samples. Chronoamperometry, to some extent, also provides capacity utilization information through the total amount of capacity passed in a set period of time. The shape of the current response curve can also be used to evaluate the mechanistic properties of the EMD." Donner states on lines 56+ in columns 11 and 12 "The counter and reference electrode connections from each

channel were connected to the platinum counter electrode in the cell, making it common for each electrode. Cell voltage versus time data was recorded for each electrode in the array. The electrolyte in the cell was changed by using the automated pumping system. At the conclusion of each deposition (which may involve one or more of the electrodes), the electrolyte was pumped out through the electrolyte removal tube, and water was pumped into the cell to rinse the electrode and cell. The rinse water was pumped out using the electrolyte removal tube. After three rinsing steps, the new electrolyte was added to the cell. After electrolytic manganese dioxide (EMD) had been deposited on each of the electrodes in the array, the heating apparatus was turned off, and the cell was rinsed thoroughly with water." It would have been obvious to one of ordinary skill in the art that Donner provides an experimental data analysis means for working out experimental data at each point of time during an experiment.

The Applicant states in the third paragraph on page 5 "Applicant submits that the Examiner has apparently used impermissible hindsight reasoning in concluding that Chestnut makes up for the deficiencies of Donne, as Chestnut does not even mention applying the technology discussed therein to an electroplating experiment." In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). As far as the use of the computer, Chestnut states on page 48 "The use of computing for on-line process control is to provide timely signals to enhance the value of its outputs. The computer is in fact an intimate part of the process; it receives inputs from the process and in turn its outputs may serve as inputs to the process." Thus, chestnut provides motivation for utilizing a computer in an experimental process control environment.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (703) 308-2005. The examiner can normally be reached from 7:30 to 3:30 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (703) 308-0538. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

May 25, 2004

Albert W. Paladini
Primary Examiner
Art Unit 2125